Agriculture and Forestry Technical Work Group

Draft Policy Option: A1b. Manure Management – Land Application

1. Policy Description:

   a. Lay description of proposed policy action: *Reduce N20 emissions from daily spread and other land application of dairy and feedlot cattle manure through the use of better application methods, such as direct injection of liquid waste. These application methods are designed to reduce contact of manure nitrogen with air (lowering the rate of denitrification) and the amount of manure nitrogen loss via leaching and runoff.*

   b. Policy Design Parameters:

      i. Implementation level(s) beyond BAU: *Program goal of changing manure land application methods for **X** head of cattle.*

      ii. Timing of implementation: *Head of dairy and feedlot cattle affected from 2006-2020, including head of cattle in 2010, 2020 and 2050.*

      iii. Implementing parties:

      iv. Other

   c. Implementation Mechanism(s): Indicate which mechanisms are to be used, and describe the specific approach that is proposed

      i. Information and education

      ii. Technical assistance

      iii. Funding mechanisms and or incentives

      iv. Voluntary and or negotiated agreements

      v. Codes and standards

      vi. Market based mechanisms

      vii. Pilots and demos

      viii. Research and development

      ix. Reporting

      x. Registry

      xi. Other?

2. BAU Policies/Programs, if applicable:
    a. Description of policy/program #1
    b. Etc.

3. Types(s) of GHG Benefit(s):
    a. CO2: *Not applicable*
    b. CH4: *Not applicable*
    c. N2O: *Reduces N20 emissions by minimizing manure nitrogen contact with air; or nitrogen losses via leaching or runoff which result in subsequent N20 emissions.*
    d. HFC's, SFC's: *Not applicable*
    e. Black Carbon: *Not applicable*

4. Types of Ancillary Benefits and or Costs, if applicable:
    a. Reduction of ammonia, VOC emissions, and odor.
    b. Increased in nitrogen utilization by crops and pastures.
    c. *Decreased leaching and runoff of nitrogen to ground and surface water.*

5. Estimated GHG Savings and Costs Per $MMTCO_2e$:
    a. Summary Table of:
        i. GHG potential in 2012, 2020, 2050
        ii. Net Cost per $MMTCO_2e$ in 2012, 2020, 2050
    b. Insert Excel Worksheet showing summary GHG reduction potential and net cost

6. Data Sources, Methods and Assumptions:
    a. Data Sources
    b. Quantification Methods
    c. Key Assumptions

7. Key Uncertainties if applicable:
    a. Benefits

b. Costs

8. Description of Ancillary Benefits and Costs, if applicable:
    a. Description of issue #1
    b. Description issue #2
    c. Etc.

9. Description of Feasibility Issues, if applicable:
    a. Description of issue #1
    b. Description of issue #2
    c. Etc.

10. Status of Group Approval:
    a. Pending
    b. Completed

11. Level of Group Support:
    a. Unanimous Consent
    b. Supermajority
    c. Majority
    d. Minority

12. Barriers to consensus, if applicable (less than unanimous consent):
    a. Description of barrier #1
    b. Description of barrier #2
    c. Etc.